





Why We Won't Dwell On the Rearview Mirror

BY TIM GESTWICKI, NCWF CEO

What a long, strange trip it's been. Last year will surely rank among the most unforgettable in history. 2020. The year was dominated by sides—divisive, angry sides. Wear a mask or don't wear a mask. Black lives matter or all lives matter. Vaccine or no vaccine. Reality versus propaganda. Hundreds of thousands of our family, friends, and neighbors died. Incendiary lies and distrust permeated society on a near-daily basis. Our country became infected, not only with the COVID-19 virus, but with conspiracies, tribalism, unrest over social and racial divides, and an overall seemingly loss of civility, respect, and decency. The temptation is to simply throw up our hands and be thankful it's over.

But that would leave lessons unlearned. And lessons we learned aplenty.

At NCWF, first and foremost, we learned adaptability. Day-by-day became the new operational philosophy as we, and the world, learned more about the virus and what it meant for daily life. Remote working, kids out of school learning from home, restaurants and retail businesses turned to ghost towns and then into an onagain, off-again cycle of re-openings, shutting, semi-reopening again. A crazy rollercoaster ride for the world. As Zoom meetings and social distancing became commonplace, our staff learned to overcome obstacles and keep chugging ahead for wildlife and habitat. New skills were learned to deliver environmental education, connect kids to nature and communicate with policy-makers. It worked, after a bumpy start. Staff heeded the challenges and settled in full steam ahead, fully utilizing new tools that required a nimble approach to what used to be rote.

We also learned that people want to be outside. Whether due to quarantine cabin fever or for physical, emotional, spiritual well-being, people yearned for and sought nature in historic numbers. People flooded our parks and trails. Boat ramps, tree stands, and blinds were full. And even more took a stroll in neighborhood parks or simply sat on backyard porches—wondering why it took a pandemic to get them outside—proving again that we seek nature for calmness and for its healing virtues.

We learned again that conservation unites. In the face of entrenched partisanship, 2020 had tremendous conservation victories. Even though the media basically was absent in coverage, something historic happened in Washington D.C. and in Raleigh. Historic conservation legislation was adopted by whopping margins in actual bi-partisanship. Elsewhere in these pages we cover the Great American Outdoors Act and American Conservation Act and the ongoing commitment to land and water conservation in North Carolina. These were the most significant victories of last year. Conservation is the blueprint to follow for reaching across the aisle for common good. Hopefully the remaining elected officials will remove their heads from the sand and

Through your support, your NCWF survived and, in many ways, thrived in our wildlife efforts. Thank you! stop ignoring serious and egregious failings in our natural resources management. Especially when it comes to marine fisheries management.

Finally, we learned that our members and supporters are the best and most dedicated investors in wildlife conservation—bar none. You roundly came through for the cause even in the face of the pandemic and financial ruin spreading across the country with unemployment numbers skyrocketing. Through your support,

your NCWF survived and, in many ways, thrived in our wildlife efforts during a bizarre year. Thank you!

I hope you enjoy this Best and Worst review of the year and the work ahead. Now more than ever we must use our respected platform as a voice for wildlife. There is no time or place for fake news, myths and downright lies. We will put our science-based policy recommendations forth, and support science and biological management by resource agencies as these days more than ever science must guide efforts. We must invite, welcome, and work with diverse partners on conservation to lift up our impact. We must hold elected officials accountable to the sacred oaths they swear to uphold. And if we stay steadfast, perhaps we look back next year and see a year for the record books: A 2021 filled with positivity, proactiveness, and unity for conservation and humanity. We approach our righteous work with clear eyes, full hearts, and devout purpose. Thanks for being here every step of the way.

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Designed by: Kimberly KC Schott, Red Gate Design Printed by: Progress Printing, Lynchburg, VA Published by: North Carolina Wildlife Federation

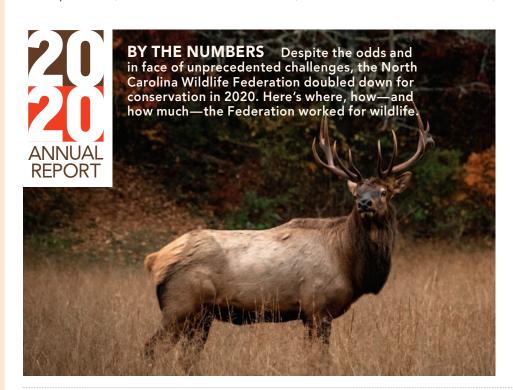
ABOUT THE COVER

Cover photograph Neither snow nor rain nor heat nor gloom of night will turn away the red-bellied woodpecker from its foraging rounds. / © iStock.com / MattCuda. Contents photograph Bull elk in field / © iStock.com / kellyvandellen. Other photos, unless noted, courtesy of NCWF.

NCWF Raleigh office: (919) 833-1923 1024 Washington Street, Raleigh, NC 27605 NCWF Charlotte office: (704) 332-5696 1346 St. Julien Street, Charlotte, NC 28205



Official publication, North Carolina Wildlife Federation (Affiliate of National Wildlife Federation)



NORTH CAROLINA WILDLIFE FEDERATION

MISSION To protect, conserve and restore North Carolina wildlife and habitat.

Our stewardship will result in a North Carolina with bountiful and diverse wildlife, including all species of wild flora and fauna, that is valued by its citizens and elected officials, and sustainably managed for future generations.

Our strength is derived from values driven leadership – science-based decision making; non-partisan approach to policy; stewardship of North Carolina's natural resources; inclusivity of broad wildlife interests and perspectives; and partnering with organizations and individuals who share our vision and our passion for wildlife.

GOALS Toward that vision, we will:

> POLICY AND PROTECTION - Strongly influence state and federal policy that affects wildlife and habitat in North Carolina using established conservation models to quide our positions.

NETWORK OF IMPACT AND INVOLVEMENT - Foster a diverse, robust network of chapters, members, affiliates and partners; a network fortified by a variety of wildlife and outdoor interests.

EXPERIENCE AND LEARN – Enhance and expand opportunities for youth and adults that foster awareness and appreciation of wildlife and the important role healthy habitat plays in sustaining wildlife and humanity.

SIGNATURE PROGRAMS - Sponsor and support programs for the enjoyment and conservation of wildlife and habitat, including ethical and sustainable outdoor recreation pursuits.

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Twenty-first century threats to our environment—including invasive species, diseases, habitat loss, pollution, and a warming climate—are putting wildlife populations at great risk. As human population increases, more and more pressures are placed on natural resources. We impact the environment. We impact wildlife. The clear takeaway is a core belief of NCWF: What is good for wildlife and its habitat is, without question or exception, essential for the well-being of humanity.

CLIMATE CHANGE

Climate change data from last year was scary as 2020 was statistically tied for the warmest year ever on the planet. It was also the most active year on record for hurricanes. A warming world means changes in species distribution and migration patterns, harmful algal outbreaks, habitat loss, warming trout waters, dried-up waterfowl breeding grounds, and the spread of disease, pests, and invasive species. The loss or degradation of natural habitats has increased the climate risks to many communities. The Federation's focus in 2021 will be on carbon sequestration methods, wildlife-friendly energy (including renewable standards and meaningful incentives for business and homeowners for solar), and climate resiliency.

Natural ecosystems, such as wetlands, riparian areas, dunes, and forests, can buffer the impact of storms, floods, and other extreme weather events on local communities. Investing in and protecting natural systems can be a cost-effective means of protecting people, property, and habitats. These natural solutions have the added benefit of being capable, in many cases, of self-repair after storm or flood damage, and can keep pace with rising sea levels. In contrast to hard infrastructure, nature-based solutions also can provide benefits for wildlife habitat, water quality, and recreation.

FRAGMENTATION

Habitat fragmentation changes the natural landscape, influencing the type and amount of suitable habitat available for wildlife. Fragmentation impacts the ability of animals to access natural resources and may affect where, when, and how wildlife move. As humans continue to develop natural areas for housing, commerce, transportation, and recreation, fewer areas remain intact to support wildlife and natural ecosystem functions. Habitat fragmentation can impact species migrations, disrupt breeding, create isolated sub-populations which further increases the vulnerability of species of concern, and causes increased mortality of wildlife on roadways.



NCWF believes coexistence with the natural world, including wildlife, is critical to sustaining human existence and that collaborative, responsible, and pro-active infrastructure planning can create feasible and effective solutions that keep natural resources intact. In the past, NCWF has advocated for maintaining contiguous areas of unique habitat vital to the existence of threatened and endangered species, which also supports biodiversity.

In terms of habitat connectivity, highways are formidable barriers to wildlife movement. In recent years, NCWF has been working in collaboration with nearly 20 federal, state, tribal, and non-governmental organizations to evaluate wildlife movement to make a 28-mile stretch of I-40 near the Great Smoky Mountains National Park permeable for wildlife and safer for people and animals. This work is known as Safe Passage: The Pigeon River Gorge Wildlife Crossing Project.

HABITAT LOSS

Wildlife is dependent upon available, suitable habitat, which is the currency for all species conservation. The word "habitat" represents an area consisting of the essential resources needed to promote species survival—food, water, shelter, and places conducive for reproduction and raising young. An array of healthy habitat types supports species biodiversity, which in turn supports clean air and water, and overall ecosystem health and function. Healthy wildlife populations also sustain recreational opportunities including wildlife watching, photography, and hunting and fishing, and may have cultural significance as well.

Viewed in this way, habitat is the foundation for wildlife, and to a broader extent, natural resource conservation. Conservation and sustainability of all wildlife in North Carolina ultimately depends on, and is inextricably tied to, quality habitat. Urbanization and sprawl, catalyzed by an increase in human populations, continues to transform the ecological landscape, especially in states such as North Carolina, home to two of the fastest-growing cities in America (Charlotte and Raleigh). As human infrastructure increases, wildlife habitat decreases. Between 1982 and 1997, more than one million acres of forest land across the state, totaling 5.9 percent of

NORTH CAROLINA is home to

of the fastest-growing cities in America.

total land mass, was converted to accommodate human expansion. Future forecasts estimate an additional loss of 5.5 million acres by 2040. As an organization that passionately advocates for wildlife and natural resources, we will continue to work to provide quality habitat, increasing opportunities for wildlife to utilize food, water, shelter, and places to raise their young.

IMPACT OF NON-NATIVE PLANTS

When discussing wildlife habitat and restoration, it's important to highlight the overuse of turf grass in urban and suburban America, and the negative impacts nonnative, invasive plant species can have on flora and fauna. A staggering 40 million acres of land in the U.S. is turf grass, which is often comprised of non-native species, providing minimal food, cover, or value for wildlife. Manicured lawns can be high-maintenance in terms of frequent mowing, fertilizer and pesticide applications, and constant watering, especially during times of drought. Additionally, species considered native tend to require less maintenance and care. The loss of native habitat and available resources due to the widespread use of turf grass is further amplified by the increased ability of non-native, invasive species to colonize disturbed areas or the few remaining natural areas.

A categorization of "non-native" doesn't always mean the species in question is invasive. Invasive species are typically non-native or introduced species that have the ability to reproduce and spread at a high rate, outcompeting native species and potentially causing environmental harm. Chinese bushclover, tree-of-heaven, Japanese honeysuckle, kudzu, and autumn olive are just a few of the invasive plant species found in the state.



VISIT NCWF.ORG FOR A LIST OF NATIVE PLANTS RECOMMENDED FOR POLLINATORS.

The best way to support wildlife is by using plants that provide food, cover, and places to raise young. Native species, of course, are best. NCWF's Garden for Wildlife programs, including the Butterfly Highway and Certified Wildlife Habitats, encourage the use of native plant species to support a myriad of animals in North Carolina. While many exotic plants are sold and planted with the intent of supporting wildlife, some may do more harm than good. In addition, many native insects may be incapable of utilizing non-native plants. Five great native trees that support important insect populations are native oaks, cherries, birches, willows and maples, which collectively support more than 1,000 species.



Some insects need a specific type of plant to complete their life cycle, such as the monarch butterfly, which feeds only on milkweed in its larval stage. To support wildlife in your yard, you can reduce lawn area, plant a variety of native species to maximize wildlife benefits, provide vegetation with different heights and structure, and select species that provide food for wildlife throughout the seasons. NCWF will continue to install pollinator-friendly habitat and support habitat connectivity in urban areas through education and efforts to make native plant species more widely available to the public. Also, our organization will continue to advocate for funding to support invasive species removal and will support our chapter network in their efforts to implement invasive plant removal projects.

PLASTICS

Scientists predict that by 2050 there will be more plastic in the ocean than fish. Plastic, a predominantly non-biodegradable material, makes up about 90 percent of human-produced trash. Unfortunately, plastic is often mistaken as food and ingested by wildlife, resulting in starvation, entanglement or strangulation. In fact, 180 marine species have been documented eating trash after mistaking it for food, and some animals may be attracted to plastic because it smells like food. While plastic may break down into smaller pieces, these microplastics still negatively impact wildlife. Harmful chemicals leach out of plastics and enter waterways and food chains, causing environmental degradation and eventually making their way into humans.

Around **80%** of marine litter enters the ocean via sewers, storm drains, and other inland sources.



Despite the alarming amount of plastic currently in the environment, immediate action can still be taken to prevent additional trash from reaching waterways and being carried through the air to nearly every corner of the globe. Around 80 percent of marine litter enters the ocean via sewers, storm drains, and other inland sources. Our Trees4Trash program, where one tree is planted for every 25 pounds of trash collected from the environment, gives us hope that plastic items won't outnumber fish in the ocean. Through this statewide effort of collecting and properly disposing of trash before it enters our waterways, we can prevent it from

polluting local landscapes and help save wildlife from premature death. While we will continue to implement community-based clean-up and native planting projects, NCWF will also advocate for product producers and industry to do their part in the fight against plastics ending up where they don't belong.

COMMERCIALIZATION AND EXPLOITATION

The commercialization and exploitation of natural resources have serious impacts on wildlife. President Franklin Roosevelt said, "we must especially beware of that small group of selfish men who would clip the wings of the American Eagle in order to feather their own nests." From our forests and fields to our marine waters and wetlands, natural resource extraction and abuses, whether it be seismic drilling, alteration of wetlands, or utilizing unsustainable amounts of forest to stock wood pellet consumption by European nations, can result in serious ramifications for wildlife. Poaching, illegal wildlife trade, farming deer and elk, and nonsustainable fishing practices harm wildlife. Another Roosevelt President, Theodore, famously stated, "The United States at this moment occupies a lamentable position as being perhaps the chief offender among civilized nations in permitting the destruction and pollution of nature. Our whole modern civilization is at fault in the matter. But we are, as a whole, still in that low state of civilization where we do not understand that it is also vandalism wantonly to destroy or permit the destruction of what is beautiful in nature, whether it be a cliff, a forest, or a species of mammal or bird. Here in the United States, we turn our rivers and streams into sewers and dumping-grounds, we pollute the air, we destroy forests and exterminate fishes, birds and mammals." Wildlife belongs to everyone and we will continue to challenge the commercialization and exploitation of wildlife using the public trust doctrine and the North American Model of Wildlife Conservation as guidance.

FUNDING

Despite a few landmark legislative wins for wildlife and natural resources in 2020, financial cuts on the national level kept coming with agency cuts across the board and COVID-19 creating future financial uncertainty. With funding backlogs and limited resources already the norm, these cuts only further hamper agencies such as the Fish and Wildlife Service, Department of Interior, and Forest Service in the ability to fulfill their statutory duties to manage natural resources. North Carolina's Department of Environmental Quality has seen a 34 percent funding cut over the last decade. Without sufficient financial support, it is difficult for staff to adequately address, monitor, and keep pace with the numerous infractions from unlawful sedimentation, input of contaminants into water sources, to violations to air emission standards.



Many wildlife species, especially those that receive little to no direct funding, are in fairly dire shape. America has a successful history of bringing wildlife back from the brink of extinction through professional wildlife management combined with collaborative, on-the-ground conservation. A century ago, prized game species such as elk, wood ducks, wild turkeys, bighorn sheep and striped bass were at risk of extinction. Now these species are largely thriving because license fees and excise taxes paid by America's hunters and anglers have been dedicated to habitat conservation with the intent of supporting species utilized by these groups. While collaborative conservation has led to numerous successes, today more than 12,000 wildlife species across our nation—including 457 in North Carolina—are considered "species of greatest conservation need," as identified by various state fish and wildlife agencies. These species, including pollinators, frogs, turtles, songbirds, shorebirds, and freshwater mussels, often receive neither the attention nor funding sufficient to recover their populations when declines occur.

Despite the alarming status of many species in need, a solution exists in the federal Recovering America's Wildlife Act. This bill would provide the dedicated funding needed to build upon the conservation model that has produced the remarkable successes for game species by investing U.S. Treasury dollars in proactive, collaborative, and voluntary wildlife conservation efforts at the state level. In 2020, there were more than 185 co-sponsors of the bill in the U.S. House of Representatives with bi-partisan support from members of the North Carolina delegation. In 2021, NCWF will work diligently to ensure this legislation has every opportunity to become law.



WILD TURKEYS ARE ONE OF NORTH CAROLINA'S SUCCESS STORIES, RETURNING FROM THE BRINK OF EXTINCTION A CENTURY AGO TO THRIVING POPULATIONS ACROSS THE STATE TODAY.



Given the COVID-19 restrictions in place, many NCWF in-person events such as the PAWS and LNWC wildlife banquets and Charlotte Wildlife Stewards' Wild on the Water paddle-a-thon didn't take place. However, enthusiasm for programming was eagerly met by NCWF with dozens of online programming opportunities. And Federation chapters pivoted to monthly wildlife programs using online tools and creative marketing. Here are 2020's most popular programs as measured by participation.

- Wildlife Photography Contest
- Trees4Trash Neighborhood Cleanup Challenge
- Bringing Nature Home with Doug Tallamy webinar
- Coexisting with Wildlife webinar
- Environmental Justice with Dr. Mustafa Santiago Ali webinar
- Box Turtles of North Carolina webinar
- Native Plants webinar
- Reptile Series: Snakes webinar
- Reptile Series: Alligators webinar
- Red Wolf webinar
- Reptile Series: Lizards webinar



Coming Up: New Programs and New Energy

Exciting launches ensued in 2020 for the Federation, with many of these programs unfolding more fully in 2021.



Horseshoe Crab Recovery Coalition. NCWF joined this Atlantic coast effort dedicated to ensuring recovery of the American horseshoe crab. Horseshoe crabs have been overharvested for bait and for their blood which has been used in biomedical research.



Safe Passage: The Pigeon River Gorge Wildlife Crossing Project. NCWF serves on the executive committee for this effort. The newly launched web site, www.smokiessafepassage.org, allows viewers to donate to a road mitigation fund to help make the 28-mile stretch of Interstate 40 along the Great Smokies safer. The project kicks off with a bridge renovation at Harmon Den in the fall of 2021, followed by other wildlife crossing opportunities including additional bridge replacements.

Trees 4 Trash. A definite success highlighting engagement of communities in clearing waterways of garbage and replacing with native trees and shrubs in partnership with Plastic Ocean Project.

Artemis. NCWF promotes this project to increase engagement by women in camaraderie and peerto-peer experiences outdoors. As sportswomen and conservationists, Artemis participants do more than hunt and fish. An obligation to give as well as receive and an inclusive culture permeate the philosophy.

FREEWILL FreeWill. NCWF members and supporters do much to protect North Carolina wildlife. NCWF partnered with FreeWill to offer an online tool for writing wills. Make a free, legal plan for the people and the wildlife you love at www.FreeWill.com/NCWF.



Fresh Look on the Web. NCWF's new website is a refreshed, updated way to provide information, data and solutions to wildlife conservation and ways to engage.



Academics Afield. In partnership with other southeastern Wildlife Federation affiliates, NCWF is collaborating with N.C. State University, N.C. Wildlife Resources Commission, and other local wildlife and conservation groups on a program to engage college students from nontraditional backgrounds. The goal: Introducing and facilitating their interest in connecting with wildlife and the outdoors through educational events and mentored hunting opportunities.



Wildlife by the Numbers

North Carolina's outdoor economy is a critical foundation for a vibrant and sustainable financial future for the state. Outdoor spending in the state:

- Contributes \$28 billion per year in consumer spending
- Provides 260,000 jobs
- Supports \$1.3 billion in state and local tax revenue
- Provides more consumer spending than banking, finance, and insurance services combined
- North Carolina's mountain trout fishing supports
 \$383 million annually to the state economy
- Great Smoky Mountains National Park is the most visited national park in the country
- North Carolina is the 2nd highest producing solar state in the nation, behind only California
- In 2020, hunting and fishing license sales surged across the country and sales of North Carolina's Unified Inland Fish/Coastal Recreational Fishing licenses exploded with a sales increase of more than 90 percent from May through the end of the year.
- North Carolina's state parks and recreation areas welcomed 19.8 million visitors in 2020 — a record and 1.2 million more visitors than in 2019.



NCWF by the Numbers

The Federation's work continued throughout 2020.

- To date, more than 14,426 certified wildlife habitats
- From the mountains to the sea, nine certified Community Wildlife Habitats
- In the Butterfly Highway program, more than **2,100** registered pollinator habitat sites
- In 2020 alone, 2,100 trees and shrubs planted
- In 2020 alone, 1,800 pollinator plants/herbaceous perennials planted
- **80,000 venison meals were donated** in 2020 through our deer donation program and assistance from volunteer groups and chapters
- In 12 months, our chapters and partners removed
 67,000 pounds of garbage from the environment



LOWELL MASON

GREAT AMERICAN OUTDOORS ACT

Signed on August 4, 2020, the Great American Outdoors Act was hailed by NCWF as one of the most important conservation milestones in a generation. The legislation permanently and fully funds the Land and Water Conservation Fund (LWCF) and creates a fund to address an enormous maintenance backlog on public lands.

"Whether you hunt, fish, hike, paddle or simply value the ecological services these habitats provide, public lands are part of our heritage and future," said John Hair, board chair for the Federation. "This legislation will ensure our iconic and treasured public lands and natural landscapes will endure for future generations. And it proves that conservation can again bridge political divides. There are no Republican national parks nor elk and there are no Democratic national wildlife refuges nor box turtles."

NCWF recognizes the significance of this landmark win for America's public lands, water and wildlife. Local communities across the country will be able to fund local parks, trails and other outdoor recreation areas. It will also spur economic recovery and support thousands of jobs. Funding of the federal government's deferred maintenance of public lands will be administered through a newly established National Parks and Public Land Legacy Restoration Fund. In North Carolina, public lands such as the Great Smoky Mountains National Park, Blue Ridge Parkway, and national forests, national seashores, and national wildlife refuges will benefit.

AMERICA'S CONSERVATION ENHANCEMENT ACT

Coming on the heels of the passage of the Great American Outdoors Act came the adoption of the America's Conservation Enhancement Act (ACE). The Federation urged the North Carolina delegation to support this effort, which was approved unanimously by the U.S.

Senate and by unanimous consent in the House. The bipartisan bill contains many long-standing conservation priorities for North Carolina and the nation, among them:

- Reauthorize the North American Wetlands Conservation Act, which increases waterfowl populations and wetland habitat, while also supporting local economies, hunting, fishing, seafood production, and flood control.
- Develop an interstate action plan for cooperation on Chronic Wasting Disease, and fund additional research on this deadly transmissible disease of the nervous system in moose, elk and deer.
- Authorize new funds to fight invasive species.
- Encourage public-private partnerships for promoting fish conservation.
- Reauthorize the National Fish and Wildlife Foundation Establishment Act which supports conservation and public-private partnerships.

CONSERVATION TRUST FUNDS

North Carolina's conservation trust funds provide essential support to land and water protection projects across our state. NCWF serves on the executive committee of Land for Tomorrow, a statewide coalition of conservation and wildlife organizations and parks and recreation advocates with a common goal: increasing land and water conservation in North Carolina. These trust funds have a huge impact from the mountains to the coast:

- N.C. Land and Water Fund: 500,00 acres of watersheds protected
- Parks and Recreation Trust Fund: 900 local park projects funded
- Farmland Preservation Trust Fund: 22,400 acres of family farms protected





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Marine Species in Alarming Decline

The following list provides commercial landings data for historically important marine resources to the state of North Carolina. While commercial landings are not the only measure of fish stock health, they provide a disturbing trend that reflects poorly on any successes, and thus effectiveness, of N.C.'s Fisheries Reform Act of 1997. This list provides commercial landings data for historically important marine resources in North Carolina. The corresponding percentage beside each species reflects the decline in landings between 1997 and the most current landings data reported for 2019.

Blue crab -59%

Bluefish -63%

Croaker -88%

Southern flounder -81%

Striped bass -77%

Striped mullet -44%

Soft crabs **-75%**

Weakfish -97%



Top **6** Can't Miss Wildlife Viewing ADVENTURES

- The northeastern Albemarle peninsula is home to the last remaining wild red wolves in the world.
 They are very shy by nature, but you can catch their howling sounds at national wildlife refuges or check out the NCWF-supported programs at Pocosin Lakes National Wildlife Refuge's Red Wolf Center. (Once COVID restrictions are removed.)
- Snow geese and tundra swans winter across much of eastern North Carolina. They migrate south in late fall and spend their nights on lakes such as Pungo Lake and forage during the day in the fields within the Pocosin Lakes National Wildlife Refuge. Winter is the best time to see nearly 100,000 of these magnificent birds before they return to breed in western Canada and Alaska.
- Eastern North Carolina is one of the most ecologically diverse regions on the planet, and a visit to the Green Swamp will introduce you to a splendid array of orchids and carnivorous plants such as Venus flytrap and pitcher plants. If you're doubly lucky, you might catch a glimpse of a brilliantly colored corn snake there.



North Carolina is home to approximately **150-200** elk.

- North Carolina is home to approximately 150-200 elk, with hotspots in the mountain region located at Maggie Valley and Cataloochee. The best time to see them is in the fall, when the rutting bulls split the air with their bugling mating call.
- Watching hawks and other raptors during their migrations can be spectacular in the North Carolina mountains in spring and fall. Sometimes thousands of the birds can be seen at known hawkwatching sites such as Grandfather Mountain and Mahogany Rock on the Blue Ridge Parkway.
- Many of our mountain and foothill streams have strong spawning migrations of various sucker species each spring, often peaking in April and May. Good bank viewing streams include Big Laurel Creek (Madison County) and Burningtown Creek and Green River above Lake Adger (Polk County). Oconaluftee River (Swain County) below Ela Dam is a good bet for viewing many species of spawning suckers from a canoe.

Connecting Kids to Nature All Year Long

With in-person outings canceled in the spring due to coronavirus restrictions and precautions, Great Outdoors University pivoted quickly to provide our youth partner groups with wildlife and natural resources programming. As summer began, so did our outdoors programming, following social distancing and safety precautions.

- 66 day trips
- 1,401 total participants on day trips
- 20 different curriculum offerings were used, including Bird Identification, Animal Forensics, Water Wonders, Species Adaptations, and Stream Exploration
- 63 educational videos posted on social media and 11 natural resource webinars totaling over 30,400 virtual participants
- First ever Outside Every Day challenge virtual event





66 day trips













30,400 virtual participants



N.C. Wildlife in the Record Books

- The fastest bird species in the world is found in North Carolina. The peregrine falcon can dive after prey at 200 miles per hour.
- The highest diversity of salamanders in the world is found in the state. The Southern Appalachians alone are home to nearly four dozen different species.
- North Carolina's Albemarle-Pamlico Peninsula has the highest black bear densities in the world. The current world record black bear is an 880-pound bear taken in eastern North Carolina in 1998.
- Rubythroated hummingbirds can hover, fly forwards, backwards and even upside down.
- The opossum has 50 teeth, more than any other North American mammal.

- North Carolina hosts the smallest and rarest of all North American turtles, the bog turtle.
- The largest amphibian in North America, the endangered hellbender, can be found in fast-moving, clean, mountain streams.
- North Carolina is the northern geographic range limit for species such as the American alligator and the river frog. Yet it is also the southern geographic range limit for wildlife such as Wehrle's salamander and the Southern ravine salamander. Species living at the edge is one reason why the state has such extraordinary biodiversity.
- North Carolina's state reptile, the box turtle is found in all 100 counties.
- During early spring, white-tailed deer antlers can grow as much as 1 inch per day. WF



CONNECTION to **COMMUNITY** and **CONSERVATION**

RUNS DEEP "It takes an army, to beat an army." These are the words of Jennifer Skvarla-Alligood, the self-described quiet and unimposing leader of the No-OLF movement.

Make no mistake, she is a force to be reckoned with. Jennifer is a passionate person, especially when it comes to protecting that which she loves—her community, the land, and wildlife.

"I raised four children in this community and ran businesses here. I heard, out of the blue, that F18 fighter jets would be circling over this area all day long and I realized what we were at risk of losing. All of a sudden, you start to appreciate every little bird, every little sound. My passion just came out.

Charlie Shaw Society
DONOR
STORY

"We took the boat out every summer... It is why I love the outdoors, the water."

-JENNIFER SKVARLA-ALLIGOOD

There was nothing that was going to stop me. The feeling to do something was overwhelming," said Jennifer.

From 2001 to 2008, Jennifer, her co-leader, Doris Morris, and the grassroots group they created, No OLF, fought to prevent the Navy from building an outlying landing field (OLF) in rural Washington and Beaufort Counties where pilots would practice carriertype landings. They worried about what the OLF would do to the families forced to give away their farmland for the OLF. They worried about what it would do to the tens of thousands of migratory waterfowl that come to Pocosin Lakes National Wildlife Refuge every winter. They worried about what it would

do to the quiet solitude of their community. They worried about the many risks of bringing an OLF to their area.

Jennifer and her grassroots group took a very local issue that few were aware of and brought it national attention. In an unprecedented ruling in 2008, U.S. District Judge Terrence Boyle granted a preliminary injunction against the Navy, stopping the development of the OLF.

"I knew we had a good shot at winning because we were protected by the courts and the power of a grassroots movement," said Jennifer. "We were defending a place where only 13,000 people live."

The No-OLF movement and her leadership role in it introduced Jennifer to North Carolina Wildlife Federation. NCWF was a plaintiff in the lawsuit against the OLF. Jennifer joined NCWF's Board of Directors because she felt like it was the strongest wildlife organization in the state.

"NCWF is adamant about what they believe. For example, the red wolf. They are putting real time and effort into saving the species. How could you not be involved with something like that? They help the little guy," Jennifer said.

Jennifer feels that growing up near the Ramapo Mountains outside New York City affected how she interacted with the outdoors. "My parents made us go outside until sun down. We were free without parents breathing down our necks," she said. Jennifer also has lasting childhood memories with her family sailing on a 26 foot Chris Craft. "We took the boat out every summer, up the Saint Lawrence Seaway into Montreal Canada. We would spend weeks on the boat. It is why I love the outdoors, the water. I felt a great sense of peace on that boat."

Jennifer fears that not enough people appreciate wildlife and their habitats, yet she also sees great opportunities to do good. For example, she feels optimistic about marine fisheries reform and what it means for North Carolina's coastal estuaries and the wildlife that need it to survive.

Jennifer knows better than most that having passion for a cause is important but you can't beat people over the head with it. It takes time, effort, strategy, and following the rule of law with a little creative problem solving mixed in.



What is your **Legacy?**

Having a will is important to ensure your wishes are fulfilled as well as to care for that which you love—family, friends, pets, and even conservation. We want to make it easy for you to take action and have partnered with FreeWill to give you a free, online tool to help you write your will in 20 minutes or less. This is the most powerful way to protect the people you love, and can even be a bold step to ensure your legacy continues to protect, conserve, and restore wildlife and habitat of North Carolina—without spending a cent today.

Get started at FreeWill.com/NCWF or contact Dom Canavarro, NCWF director of development, at (919) 239-3361 or dom@ncwf.org, and he'll walk you through the process and answer any questions you have.



Wildlife and their habitats are faced with many threats to survival but together with NCWF, you can give them a fighting chance. There are many ways to help. Below are just a few examples.

To speak with a staff member about your interests, contact Kate Greiner, vice president of philanthropy, at (704) 332-5696 or kate@ncwf.org. Thank you for your partnership in the cause!

Join Charlie Shaw Society Charlie Shaw Society is made up of individuals who give cumulative annual gifts of \$1,000 or more. Their level of investment gives them special access and invitations to participate in unique wildlife experiences in North Carolina as well as access to timely and tailored conservation news and updates that they care about.

Leave a Wildlife Legacy Many people like to leave a gift to charity in their will because they care about causes that are important to their lives. A gift to NCWF in your will or estate plans ensures future generations can enjoy the wildlife and habitat that you care about in North Carolina. If you have left NCWF in your will let us know, we'd love to thank you and celebrate your commitment. Don't have a will and need one? NCWF has partnered with FreeWill to give you a free, online tool to help you write your will in 20 minutes or less. Get started at FreeWill.Com/NCWF or contact us and we'll walk you through the process and answer your questions.

Become a monthly donor Monthly giving is the easiest and most efficient way to support NCWF and protect the wildlife and wild places you love. Your monthly donation means you are automatically eligible to enjoy all of the membership benefits! You can easily start, change or stop your gift any time.

Become a member or renew With a gift of \$25 or more, you can become a NCWF member and join the thousands of others who care about conserving wildlife and habitat in North Carolina. NCWF members are the backbone of our vision, mission, and work and receive special benefits to celebrate their commitment to the cause, become involved, and stay up to date on conservation news and events.

Give through stock, donor advised fund, family foundation, or IRA There are many ways to invest in NCWF. Doing so by stock, donor advised fund, family foundation, or IRA are some unique ways that may best suit you given your particular financial situation.

Garden for Wildlife Certifying your yard or garden, big or small, is a great way to help wildlife and their habitats. NCWF offers many programs to do so—Butterfly Highway and Certified Wildlife Habitat are just two examples. Visit our website at ncwf.org to learn more.

Plant native seeds Over the last 20 years, monarch butterflies have declined by 90 percent. Their habitat is being developed at a tremendous rate, leaving only a few places for them to emerge from their chrysalis and fuel up for the journey south to Mexico. Planting native seeds helps these and other pollinators survive. Purchase your seeds and support NCWF at ButterflyHighway.org.

Join a Wildlife Community Chapter NCWF Community Wildlife Chapters empower members to take action on behalf of wildlife and habitat in their own backyard and across the state through educational events, volunteer projects, and advocacy. There are 18 chapters statewide in which more than 1,500 North Carolinians are engaged. To find a chapter near you or how to start one in your own community, visit ncwf.org/community-wildlife-chapter.

Get email and take action Staying informed and up to date on conservation news and events is important to ensure we're holding our elected officials accountable and our communities embrace our shared conservation ethic. Sign up for NCWF's Wildlife Wire, a monthly newsletter sent to your inbox, and take action on behalf of wildlife and habitat by receiving timely alerts inviting you to write and call your elected officials. Visit www.ncwf.org to stay informed!



In Need of Wheels

It's a 545-mile drive from Murphy to Manteo, and our mountains-to-the-sea work depends upon travel. We meet with policy makers, conservation project planners, and volunteers throughout our conservation network.

We are proudly responsible with our financial resources. (In fact, our CEO is a bit of a crazy man when it comes to cutting off lights, lowering utility costs, and negotiating contracts.) And occasionally, we reach out directly to our supporters for a need that can help save us valuable resources. This is one of those times.

Reimbursing staff for mileage driven in their personal cars, and renting cars when we must, adds up. We have always relied on the generosity of our supporters for vehicles that don't need lots of repairs and get good gas mileage. And now we need two reliable vehicles.

If you have a low-mileage, fairly fuel efficient vehicle you'd like to donate to help wildlife and habitat conservation, please contact us at info@ncwf.org. As a 501c3 charitable organization, your donation is eligible for a tax deduction.



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MARCH

March 1: Herring and shad spawning runs are beginning. Chain pickerel are spawning. Crappie fishing begins to peak.

March 3: On warmer nights, in the southwesternmost corner of our state, listen out for Collinses' mountain chorus frog's seldom-heard "curruck, curruck, curruck" call. This newly recognized and described species is known in North Carolina only from portions of Cherokee and Clay counties.

March 4: Spring litters are arriving for our official state mammal, the eastern gray squirrel. Mink kits are also being born. Yellow jessamine is in bloom.

March 6: Several sucker species are beginning their spring spawning runs. Hepatica is in bloom.

March 8: The year's first broods of the eastern tiger swallowtail, our official state butterfly, are flying.

March 8-13: 26th annual Reptile and Amphibian Day, a huge educational event sponsored by the N. C. State Museum of Natural Sciences, will be held virtually this year. This year's theme is "Salamanders." For more information, contact miranda.dowdy@naturalsciences.org or visit https://naturalsciences.org/calendar/reptile-and-amphibian-day-2/.

March 9: Sunbonnets are in bloom in longleaf pine savannas.

March 10: Purple martins and rough-winged swallows are returning.

March 11: Southern toads and carpenter frogs begin calling in the Coastal Plain. Many reptiles are emerging from hibernation.

March 12: Eastern fox squirrels are bearing their spring litters. Young females may produce only one litter, but older ones usually have a second litter in summer.

March 13: American woodcock are nesting. Peak fishing for hickory shad on the Roanoke and Tar rivers.

March 15: Eastern cottontails are bearing their spring litters. Skunk cabbage is in bloom. Redtailed hawks begin nesting.

March 17: Rue anemone and serviceberry are blooming.

March 19: Bachman's sparrows have begun singing in longleaf pine savannas in the Sandhills and southern Coastal Plain. Walleye fishing peaks in some of our western reservoirs.

March 20: Spring springs early today, with the vernal equinox at 5:37 a.m. EDT (09:37 Coordinated Universal Time). Trout lilies, bloodroot, and several other early spring wildflowers are already in bloom.

March 23: Chimney swifts and common night-hawks are returning.

March 24: Fox pups are being born.

March 25: Yellow-throated warblers and other early spring migrant songbirds are arriving.

March 26: Blue toadflax is in bloom.

March 28: Shorebird migration is peaking along the coast. Pea Island and Lake Mattamuskeet National Wildlife Refuges, Cape Hatteras National Seashore, and Fort Fisher State Park are among the many spots providing good shorebird viewing.

March 29: Brown-headed nuthatches are nesting. Eastern mud turtles are mating.

March 30: Bluets and several violet species are in bloom. Southern cricket frogs are calling in the Coastal Plain.

March 31: Whip-poor-wills and chuck-will's-widows have begun calling. Several baskettail dragonfly species are flying.

APRIL

April 1: Killdeer are nesting. Palamedes swallowtails are flying. White-eyed vireos are returning.

April 2: Ruby-throated hummingbirds are returning.

April 5: Eastern bluebirds begin laying eggs. Cutleaf evening-primrose is in bloom.

April 6: Fowler's toads begin calling. White bass fishing peaks on some western lakes and rivers.

April 6-10: National Wildlife Week. Visit https://nationalwildlifeweek.nwf.org/ to learn more about celebratory activities and resources.

April 7: Muskrat kits are being born.

April 8: Spicebush swallowtails are flying.

April 11: Eastern redbud is in bloom. Cooper's and sharp-shinned hawks begin nesting.

April 12: Lupines are in bloom in the Coastal Plain and Sandhills.

April 13: Orchard orioles are returning. Northern bobwhites begin calling.

April 14: Our official state frog—the Pine Barrens treefrog—has begun calling. This uncommon species breeds in bayheads and seeps within the longleaf pine ecosystem in portions of our Sandhills and Coastal Plain.

April 17: Wild turkeys begin nesting.

April 18: Ruffed grouse are drumming.

April 19: Ospreys are nesting.

April 20: Northern bobwhites begin nesting. Wood duck eggs are hatching.

April 21: Eastern bluebird eggs are hatching. Mayapple, Carolina sandwort, and Carolina wild indigo are in bloom. Red-eyed vireos, summer tanagers, and great crested flycatchers have returned.

April 22: Earth Day. Many activities celebrating life and wild things on Earth will take place this week. Contact your favorite environmental organization to learn about events near you.

April 22-23: Lyrids meteor shower. Best viewing will be from a dark location after midnight.

April 24: Yellow pitcher-plants and savanna Barbara's-buttons are in bloom.

April 26: Bobcat kittens are being born. American bullfrogs have begun calling over most of the state. Foam flower, Solomon's seal, and false Solomon's seal are in bloom.

April 27: The first Supermoon of the year will appear tonight (i.e., the moon will be full and near its closest approach to Earth, and may look slightly larger and brighter than usual). This moon has been variously known as Pink Moon, Sprouting Grass Moon, Growing Moon, Egg Moon, and Fish Moon.

April 28: Peak bloom for our state flower—flowering dogwood—over much of the state. Yellow-billed cuckoos have returned. Many sunfish species are spawning.

April 30: Yellow-bellied sliders have begun nesting. Raccoon kits are being born. Watershield, little floatinghearts, and dwarf bristly locust are in bloom.